UNITED STATES

TITLE: RETAIL MERCHANDISING APPARATUS AND METHODS THEREFOR

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RETAIL MERCHANDISING APPARATUS AND METHODS THEREFOR

FIELD OF THE INVENTION

[0001] The present invention relates generally, to the field of retail merchandising and more specifically, to retail merchandising apparatus and methods therefor.

BACKGROUND OF THE INVENTION

[0002] Historically, the merchandise retail environment has been characterized by stores filled with shelves of merchandise, said merchandise being periodically replenished by stock clerks from inventory.

[0003] A feature of the 1990's was a surge in stand-alone "big-box" store construction, with a large number of stores being built, for example, in the 100,000+ square foot category.

[0004] This increase in available floor space provided the impetus for many retailers to place pallets of merchandise directly on the retail floor, thereby to substantially reduce the cost associated with stock replenishment. However, while this retailing technique has a substantial advantage, in terms of stock replenishment costs, it has a readily apparent disadvantage, namely, aesthetics, and it is well-known that

the attractiveness and general qualities of a display can have a direct effect on the sales of a displayed product.

[0005] Accordingly, a relatively recent trend has been the development of improved pallet aesthetics.

[0006] One simple method by which pallet aesthetics have been improved is through the use of special packaging for each layer of merchandise, in substitution for the simple corrugated cardboard flats that same would otherwise typically be shipped in. This method is relatively inexpensive. However, it suffers in that often, notwithstanding that aesthetically-pleasing flats have been created at substantial cost, the overall commercial impression created by the display remains the undesirable "warehouse/box store look".

[0007] A more complex method is to house the merchandise in a custom display unit, and ship the custom display unit, complete with merchandise, on a pallet to the retailer. Often, the display unit utilizes the pallet for structural support, so as to minimize material cost. This method provides greater flexibility, and can avoid the "warehouse/box store look", but comes at substantially greater cost, and is also disadvantageous in that the custom display unit,

typically constructed out of printed cardboard, is discarded after use, to the general detriment of the environment.

[0008] It will be evident that neither method poses a desirable solution to the aesthetics problem associated with pallet displays.

[0009] In addition to these unresolved aesthetic issues, the use of pallet displays also poses drawbacks to retailers in terms of floor damage, to the extent that some retailers, in an attempt to avoid damage, physically repalletize products received from manufacturers on custom, floor-friendly pallets or display trolleys. This is most common in the context of pallet displays of the simple type composed of stacks of flats of merchandise (or stacks of merchandise) and has as its main drawback the associated labour cost, which is exacerbated by the need to carry out such repalletizion with due caution, so as to avoid the creation of an unstable stack that might topple onto a consumer and cause injury. However, it is actually known for retailers to repalletize pallet displays of the type including custom display units, and to prejudice the structural integrity of the display unit in the process, with consequent serious deleterious impacts upon safety.

[0010] Yet further, irrespective of the amount of money expended to create (and potentially recreate, through repalletization) pallet displays, there remains the problem that, as the merchandise on the pallet becomes depleted, it becomes progressively more difficult to purchase by passers-by (who must stoop down to retrieve product). In the context of a pallet display of the prior art, this problem can practically only be resolved through periodic restocking, which, of course, would defeat the purpose of pallet displays entirely.

[0011] From the foregoing, it is apparent that what is needed is a versatile retail merchandising device that overcomes the drawbacks associated with the prior art retail merchandising devices, described above. Accordingly, it would be advantageous for a retail merchandising device to allow merchandise items stacked on a loaded pallet to be displayed in an aesthetically-pleasing manner while avoiding the creation of the undesirable "warehouse/box store look". Moreover, a retail merchandising device which could allow merchandise items to be maintained at a convenient height for consumer purchase with minimum restocking effort and labour would be desirable.

SUMMARY OF THE INVENTION

[0012] According to a broad aspect of the invention, there is provided a retail merchandising apparatus for use with a pallet stackable with merchandise items arranged in multiple layers thereon to form a loaded pallet. The retail merchandising apparatus includes: pallet support means for bearing the loaded pallet; lifting means operatively connected to the pallet support means for selectively moving the pallet support means between a lowered position and a raised position relative to a floor; and an open-topped housing accommodating the pallet support means and the lifting means mounted therein. The housing has a plurality of upstanding housing walls. The retail merchandising apparatus further includes display means associated with the housing for placing a promotional message within view of a customer. When bearing a loaded pallet, the pallet support means is selectively positionable within the housing such that a selected portion of the merchandise items carried on the loaded pallet protrudes at least partially from the top of the housing within view of the customer.

[0013] In another aspect of the invention, the retail merchandising apparatus may be used as an end-of-aisle display unit. Alternatively, the retail merchandising apparatus may be used as a mid-aisle display unit. In a still further

alternative, the retail merchandising apparatus may be used a shelf-mounted display unit.

[0014] According to another broad aspect of the invention, there is provided a retail merchandising apparatus for use with a pallet stackable with merchandise items arranged in multiple layers thereon to form a loaded pallet. The retail merchandising apparatus includes: pallet support means for bearing the loaded pallet; lifting means operatively connected to the pallet support means for selectively moving the pallet support means between a lowered position and a raised position relative to a floor; and an open-topped housing accommodating the pallet support means and the lifting means mounted therein. The housing has a plurality of upstanding housing walls surrounding the periphery of the pallet support means. When bearing a loaded pallet, the pallet support means is selectively positionable within the housing such that a selected portion of the merchandise items carried on the loaded pallet protrudes at least partially from the top of the housing within view of a customer, whilst the pallet and the pallet support means remain substantially concealed from the customer's view by the housing walls.

[0015] According to yet another broad aspect of the invention, there is provided a method for merchandising a

pallet for retail use. The pallet is stackable with merchandise items arranged in multiple layers thereon to form a loaded pallet. The method includes the steps of: placing the loaded pallet on pallet support means contained within a housing; selectively moving the pallet support means between a lowered position and a raised position relative to a floor such that a selected portion of the merchandise items carried on the loaded pallet protrudes from the top of the housing within view of a customer; and displaying from the housing a promotional message within view of the customer.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The present invention may be further understood by reference to the following detailed description of the embodiments of the invention, taken in conjunction with the accompanying drawings, in which:

[0017] **Figure 1** is a front perspective view of a retail merchandising apparatus according to a preferred embodiment of the present invention, showing a loaded pallet positioned within the housing of the retail merchandising apparatus and the display panels mounted on the outer walls of the housing carrying promotional messages thereon;

[0018] **Figure 2** is a front perspective view of the retail merchandising apparatus of Figure 1 with the display panels of the housing removed and the loaded pallet removed from the interior loading space of the housing;

[0019] **Figure 3** is a top plan view of the retail merchandising apparatus shown in Figure 2;

[0020] **Figure 4** is a front elevational view of the retail merchandising apparatus illustrated in Figure 2 with the inlet door of the housing shown in an open position to facilitate viewing;

[0021] **Figure 5a** is a rear elevational view of the retail merchandising apparatus illustrated in Figure 2 with the rear outer panel wall of the housing removed to show the lifting means disposed therein;

[0022] **Figure 5b** is an enlarged, partial rear elevational view of the guide means shown in Figure 5a;

[0023] **Figure 6a** is a front perspective view of the retail merchandising apparatus illustrated in Figure 1 showing the retail merchandising apparatus prior to the loaded pallet being positioned therein;

[0024] **Figure 6b** is a front perspective view of the retail merchandising apparatus illustrated in Figure 1 showing the retail merchandising apparatus after the loaded pallet has been positioned on the pallet support means in the interior loading space of the housing, the inlet door of the housing being shown in an open position to facilitate viewing;

[0025] **Figure 6c** is an enlarged cross-sectional view of the retail merchandising apparatus taken along section '6c-6c' showing the frame member of the display panel;

[0026] **Figure 7** is an isolated, enlarged perspective view of the control station of the retail merchandising apparatus illustrated in Figure 6b, showing the flap of the control station in an open position to permit access to a control panel;

[0027] **Figure 8** is a cross-sectional view of the retail merchandising apparatus shown in Figure 6b taken along section '8-8' showing the pallet support means at the lowered position and the topmost layer of merchandise items on the loaded pallet being carried at a height below the walls of the housing at least partially out of view of a customer;

[0028] **Figure 9** is a front perspective view of the retail merchandising apparatus illustrated in Figure 1 showing the walls of the housing partially cut away to reveal the loaded pallet positioned in the interior loading space of the housing, the topmost layer of merchandise items on the loaded pallet now being carried at a merchandise display height in view of the customer;

[0029] **Figure 10** is a cross-sectional view of the retail merchandising apparatus shown in Figure 9 taken along section '10-10';

[0030] **Figure 11** is a right side elevational view of the retail merchandising apparatus of Figure 9;

[0031] **Figure 12** is a left side elevational view of the retail merchandising apparatus of Figure 9;

[0032] **Figure 13** is a cross-sectional view of the retail merchandising apparatus similar to that illustrated in Figure 10, showing the shelf at the raised position;

[0033] **Figure 14** is a front perspective view of an another embodiment of the retail merchandising apparatus to that

illustrated in Figure 1, showing an alternate configuration of the display panels mounted to the outer walls of the housing;

[0034] **Figure 15** is a right side elevational view of the retail merchandising apparatus of Figure 14;

[0035] **Figure 16** is a left side elevational view of the retail merchandising apparatus of Figure 14;

[0036] **Figure 17** is a front perspective view of a further alternative embodiment of the retail merchandising apparatus to that illustrated in Figure 1;

[0037] **Figure 18** is a front perspective view of another alternative embodiment of the retail merchandising apparatus to that illustrated in Figure 1, showing a fully loaded pallet positioned within the housing of the retail merchandising apparatus;

[0038] **Figure 19** is a top plan view of the retail merchandising apparatus shown in Figure 18 with the fully loaded pallet removed for clarity;

[0039] **Figure 20** is a perspective view of the retail merchandising apparatus illustrated in Figure 19, showing the

pallet support means and lifting means in isolation, the housing of the retail merchandising apparatus having been removed for the sake of clarity;

[0040] **Figure 21** is a front perspective view of the retail merchandising apparatus illustrated in Figure 18 showing the retail merchandising apparatus prior to the fully loaded pallet being positioned therein, the inlet door being shown in an open position and the ramp means of the retail merchandising apparatus being shown in a stowed position;

[0041] **Figure 22** is a front perspective view of the retail merchandising apparatus illustrated in Figure 18 showing the ramp means in a partially deployed position;

[0042] **Figure 23** is a front perspective view of the retail merchandising apparatus illustrated in Figure 18 showing the ramp means in a fully deployed position;

[0043] **Figure 24** is a right side elevational view of the retail merchandising apparatus illustrated in Figure 18 with the right outer wall of the housing removed, showing the retail merchandising apparatus after the fully loaded pallet has been positioned on the pallet support means in the interior loading space of the housing with the topmost layer

of merchandise items on the fully loaded pallet being at least partially out of view of a customer, the ramp means shown still in the fully deployed position;

[0044] **Figure 25** is a front elevational view of the retail merchandising apparatus illustrated in Figure 18 with the inlet door removed, showing the ramp means in a stowed or retracted position, and the pallet support means in a lowered position;

[0045] **Figure 26** is a front elevational view of the retail merchandising apparatus illustrated in Figure 18 showing the pallet support means moved to a raised position such that the topmost layer of merchandise items on the fully loaded pallet are now carried at a merchandise display height in view of the customer;

[0046] **Figure 27** is a right side elevational view of the retail merchandising apparatus of Figure 18;

[0047] **Figure 28** is a left side elevational view of the retail merchandising apparatus of Figure 18;

[0048] **Figure 29** is a perspective view of an alternative embodiment of the retail merchandising apparatus to that

illustrated in Figure 18, showing protective skirt means mounted about the lower margin of the housing;

[0049] **Figure 30** is a perspective view of alternative embodiment of the retail merchandising apparatus to that illustrated in Figure 29, showing an alternate configuration of display panels mounted to the exterior walls of the housing;

[0050] **Figure 31** is a perspective view of an alternative embodiment of the retail merchandising apparatus illustrated in Figure 18 adapted to accommodate a loaded half-pallet; and

[0051] **Figure 32** is a perspective view of an alternative embodiment of the retail merchandising apparatus illustrated in Figure 18 adapted to accommodate a loaded quarter-pallet.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

[0052] The description which follows, and the embodiments described therein, are provided by way of illustration of an example, or examples of particular embodiments of principles and aspects of the present invention. These examples are provided for the purposes of explanation, and not of limitation, of those principles and of the invention. In the description that follows, like parts are marked throughout the

specification and the drawings with the same respective reference numerals.

[0053] Referring to Figures 1 through 6a, a retail merchandising apparatus positionable on the floor (not shown) of a retail outlet, is generally designated with reference numeral 40. The retail merchandising apparatus 40 is adapted to be used with a pallet 42 upon which may be stacked merchandise items 44 in multiple tiers or layers 45, 46, 47 to form a loaded pallet 48, such as is shown in Figure 6a. The retail merchandising apparatus 40 includes: pallet support means 50 for bearing the loaded pallet 48 (best shown in Figure 4); lifting means 52 (best shown in Figures 5a and 5b) operatively connected to the pallet support means 50 for selectively moving the pallet support means 50 between a lowered 54 position (best seen in Figure 8) and a raised position 56 (best seen in Figure 13)relative to the floor; control means 58 for selectively actuating the lifting means 52; an open-topped housing 60 accommodating the pallet support means 50 and the lifting means 52 mounted therein; and display means 62 associated with the housing 60 for placing a promotional message 64 within view of a customer.

[0054] Referring to Figures 2 and 3, the housing 60 has a base member in the nature of a cross-member 66 which extends

transversely along the bottom of the housing 60, and a plurality of upstanding walls that define an open-topped, four-sided enclosure 68. Preferably, the cross-member 66 does not span the entire footprint of the housing 60 such that the bottom thereof is substantially open. This, however, need not be the case in other embodiments. In an alternate embodiment, the base member could extend about the footprint of the housing to fully enclose the bottom thereof. Moreover, such a base member could be provided with a plurality of feet (not shown) mounted to its underside for supporting the housing at a desired height above the floor. If desired, the feet could be of the self-levelling type to compensate for any unevenness in the floor.

[0055] As will be explained in greater detail below, when the loaded pallet 48 is placed onto the pallet support means 50, the enclosure 68 surrounds the pallet support means 50 to substantially conceal the pallet 42 and the pallet support means 50 from the customer's view. By selectively raising or lowering the pallet support means 50 within the housing 60, a selected portion of the merchandise items 44 carried on the loaded pallet 48 may be made to protrude at least partially from the top of the enclosure 68 within view of a customer.

[0056] In the preferred embodiment, the enclosure 68 is defined by a front wall 70, a rear double wall 72, and a pair of opposed side walls 74 and 76. The rear double wall 72 includes an inner rear wall panel 78 disposed in opposed, spaced relation to the front wall 70, and an outer rear wall panel 80 spaced from the inner rear wall panel 78 to define an internally framed compartment 82 for locating the lifting means 52 therein.

[0057] Each wall 70, 74, 76, 78 and 80 has a pair of right and left longitudinal edges 84 and 86, and a pair of upper and lower lateral edges 88 and 90. Each wall 70, 74, 76 and 80 meets an adjoining wall at respective right and left longitudinal edges 84 and 86 to define corners 92 of the housing 60. Together the front wall 70, the inner rear wall panel 78, and the pair of side walls 74 and 76 define and bound an interior loading space 94 sized to receive a loaded pallet 48 therein.

[0058] As shown in Figure 2, the rear double wall 72 defines a mast 95 which accommodates the lifting means 52 and houses the control means 58. Preferably, the mast 95 extends above the upper lateral edges 88 of the front wall 70 and the side walls 74 and 76. However, this need not be the case. If desired, in an alternative embodiment, the front wall 70 and

the side walls 74 and 76 may be sized to correspond in height to the rear double wall 72.

[0059] The front wall 70 is hinged for movement along one of the corners 92 of the housing 60 to define an inlet door 96. The inlet door 96 is moveable between an open position 98 (best shown in Figures 6a and 6b) and a closed position 100 (best shown in Figure 1). When in the open position 98, the inlet door 96 permits access to the interior loading space 94 defined within the enclosure 68. The retail merchandising apparatus 40 further includes locking means 102 for maintaining the inlet door 96 in the closed position 100. While in the preferred embodiment, the locking means 102 includes a latch mechanism 103, it will be appreciated that any suitable locking mechanism may be employed.

[0060] In the preferred embodiment, the housing 60 has a generally, rectangular shape when viewed in plan, as shown in Figure 3. In other embodiments, the housing may be configured to have a different shape, for instance, a square shape. Moreover, the housing could be fabricated with three upstanding walls to define a triangular enclosure. Further still, the housing could be made with five, six, eight or more upstanding walls to form a multi-sided enclosure.

[0061] Referring to Figures 4 and 5a, the lifting means 52 is disposed in the compartment 82 defined between the inner rear wall panel 78 and the outer rear wall panel 80 of the housing 60. In the preferred embodiment, the lifting means 52 includes mechanical drive means 104 in the nature of a recirculating ball and screw mechanism 106. The screw mechanism 106 includes a threaded screw member 108 mounted within the compartment 82 for rotation about a vertical rotational axis 'V-V' shown in Figure 5a, and a nut member 110 connected to the pallet support means 50 for threadingly engaging the screw member 108. A train of ball bearings (not shown) are mounted between the nut member 110 and the screw member 108 to travel in a recirculating fashion.

[0062] An electric drive motor 112 mounted within the compartment 82, is operatively connected to the screw member 108 by way of a gearbox (not shown) to rotatively drive the screw member. Power is supplied to the drive motor 112 by plugging the electrical cord 113 into an electrical outlet (not shown) of the store premises. In applications where such power supply would be inconvenient, a battery or other the like could be used.

[0063] The control means 58 selectively actuates the electric drive motor 112. In the preferred embodiment, the

control means 58 includes an electrical control station 114 which is mounted atop the mast 95 in reach of store personnel. The control means 58, however, need not be formed in the mast 95. In alternative embodiments, the control means can, for instance, be a foot-actuated control pedal, or a hand-held controller.

[0064] To prevent unauthorized actuation of the retail merchandising apparatus 40, the control station 114 is provided with a security flap 116 hingedly mounted to the mast 95. The flap 116 is moveable between an open position 118 (shown in Figure 7) and a closed position 120 (shown in Figure 6a). When in the open position 118, the flap 116 permits access to a control panel 122 disposed therebeneath. The control panel 122 is concealed when the flap 116 is in its closed position. A key-actuated lock 124 is provided to maintain the flap 116 in the closed position 120.

[0065] The control panel 122 has a plurality of pushbutton controls 126 which may include an ON/OFF button 128, an AUTO LEVELLING button 130, an UP button 132, and a DOWN button 134. The AUTO LEVELLING button 130 permits the pallet support means 50 to be returned to the lowered position 54 or the raised position 56 at "the touch of a button". The UP and DOWN buttons 132 and 134 may be used for more precise adjustment of

the height of the pallet support means 50. Additional pushbutton controls may be provided.

[0066] Actuation of the electric drive motor 112 by the control means 58 may be constrained by any one of the following three conditions: (a) an upper displacement limit; (b) a lower displacement limit; and (c) a maximum load limit. Upper and lower displacement limit switches 136 and 138 positioned within the compartment 82, are operatively connected to the control means 58 to signal when the pallet support means 50 has reached the raised position 56 or the lowered position 54. When, for instance, the raised position 56 has been reached, an upper switch engaging member 137 depending from the nut member 110 is made to abut the upper displacement limit switch 136 (see Figure 13). A signal that the upper displacement limit has been met is sent to the control means 58. The control means 58 cuts power to the electric drive motor 112 so that the screw member 108 ceases to be driven. In the preferred embodiment, the upper displacement limit is set at 46 inches above the floor. A lower switch engaging member 139 is similarly provided for abutting the lower displacement limit switch 138. The control means 58 acts in a similar manner when the lowered position 54 is reached and the lower displacement limit has been met. In the preferred embodiment, the lower displacement limit is set at

$^{3}/_{8}$ inches above the floor. Different upper and lower limits may be set if desired. Constraining displacement of the pallet support means 50 as described above, tends to prevent the housing 60 and the lifting means 52 from sustaining damage resulting from the electric drive motor 112 being continuously driven.

[0067] The control means 58 also monitors the load that is placed onto the pallet support means 50 by way of a load cell (not shown) to ensure that the maximum load limit is not exceeded and that the mechanical drive mechanism 104 is not damaged. If the maximum load limit is met, the control means 58 disables the electric drive motor 110 thereby ensuring that the pallet support means 50 is not raised above the floor. In the preferred embodiment, the maximum load limit is set at 2500 lbs.

[0068] The control means 58 may also be provided with additional functionality. For instance, as a safety measure, the control means 58 may be operable to disable the electric drive motor 112 when the inlet door 96 is in the open position 98 or when the locking means 102 is disengaged. Additionally, in other applications, it may be desirable for the control means 58 to be operable to engage the locking means 102 to

maintain the inlet door 96 in the closed position 100 while the lifting means 52 moves the pallet support means 50.

[0069] In use, when the electric drive motor 112 is actuated the screw member 108 is driven to rotate thereby causing the nut member 110 to ride upwardly or downwardly (as the case may be) along the screw member 108. As the nut member 110 travels along the screw member 108, the pallet support means 50 is raised or lowered, as the case may be, such that a selected portion of merchandise items 44 (typically, a single layer 45, 46 or 47, as the case may be) is made to protrude from the enclosure 68 within view of a customer. In the preferred embodiment, the pallet support means 50 may be displaced vertically a distance of 42 inches. With appropriate design modifications to the retail merchandising apparatus, this displacement distance may be varied if desired.

[0070] Conventional means (not shown) may be used to prevent back driving of the nut member 110 along the screw member 108 when the motor 112 ceases its driving action.

[0071] While it is preferred that the mechanical drive means 104 be in the nature of a recirculating ball and screw mechanism 106, it will be appreciated that other types of screw mechanisms, such as a leadscrew mechanism, could be used

to similar advantage. Moreover, in alternative embodiments, the mechanical drive means could be replaced with hydraulic drive means employing hydraulic pistons, sheave and hoist chain arrangements.

[0072] Other lifting systems operating on the principles of passive automation may also be employed. For instance, in an alternative retail merchandising apparatus, the lifting system could be pneumatic in nature employing inflatable air bags with automatic leveling functionality. Such a lifting system may be used in instances where the use of electrical power is not desirable. In a further alternative, the lifting system could be a mechanical spring system which is adapted to automatically lower or raise the pallet support means to maintain a constant display height. An advantage of this type of system is that it requires no power or air supply. It is also possible to combine pneumatic and spring lifting systems for enhanced linear response.

[0073] Referring to Figures 3, 4, 5a and 6a, the pallet support means 50 includes a substantially planar, cantilevered platform or shelf 140 upon which the loaded pallet 48 is placed. Unlike in conventional pallet display systems where the loaded pallets are placed directly on the floor surface,

the loaded pallet 48 does not come into contact with the floor so damage to the floor tends to be avoided.

[0074] The shelf 140 has four sides 142, 144, 146 and 148, each having an outermost edge. The outermost edges of the sides 142, 144, 146 and 148 co-operate with each other to define a shelf footprint 150. The shelf footprint 150 is sized slightly larger than the surface area of the pallet 42 to facilitate loading of same onto the shelf 140. Preferably, the shelf footprint 150 measures 49" x 40" to accommodate a standard 48" x 40" pallet such as is widely used in the grocery industry in North America.

[0075] Extending upwardly from the outermost edges of three contiguous sides 142, 144 and 146 are relatively short walls 152 that partially bound the shelf footprint 150. The short walls 152 define a raised guard member 154 for partially surrounding the loaded pallet 48 when same is placed onto the shelf 140. When in the open position 98, the inlet door 96 of the housing 60 provides access to the outermost edge of the remaining side 148 which has a relatively lower profile than its counterpart edges 142, 144 and 146.

[0076] In the preferred embodiment, the lifting means 52 are housed in compartment 82, substantially outside the shelf

footprint 150 (as best shown in Figure 8), thereby keeping the area beneath the shelf 140 clear of any structure or equipment which would otherwise limit the extent to which the shelf 140 could be lowered relative to the floor. As a result, during actuation of the lifting means 52, the shelf 140 may be brought nearer to the floor which tends to facilitate the loading and unloading of pallets 42 and loaded pallets 48, on and off the shelf 140.

[0077] To facilitate rolling transport of the loaded pallet 48 onto the shelf 140, the retail merchandising apparatus 40 further includes ramp means 156 associated with the shelf 140. The ramp means 156 may be deployed when the shelf 140 is moved to the lowered position 54 and the inlet door 96 is in the open position 98. In the preferred embodiment, the ramp means 156 includes a bevelled lip 158 integrally formed with the outermost edge of side 148 (best shown in Figure 8). The bevelled lip 158 extends frontwardly and downwardly from the shelf 140 to permit a loaded pallet 48 carried on a conventional hand-pumped pallet truck (not shown) to be rolled onto the shelf 140 from the adjacent floor, and conversely, to allow an empty pallet 42 to be rolled off the shelf 140.

[0078] With specific reference to Figures 4, 5a and 10, the shelf 140 is operatively connected to the recirculating ball

and screw mechanism 106 by way of a cantilever support 160. The cantilever support 160 includes a yoke member 161 securely attached to the nut member 110 and a mounting arm 162 welded to the yoke member 161. The mounting arm 162 extends away from the yoke member 161 through an elongate slot 164 centrally defined in the inner rear wall panel 78 of the rear double wall 72, for fixed connection to the shelf 140 along the side 148 thereof.

[0079] Referring to Figures 5a and 5b, guide means 166 associated with the shelf 140 and the housing 60, is provided for directing the movement of the shelf 140 within the housing 60. The guide means 166 includes a plurality of guide surfaces 168 and a corresponding plurality of roller members 170 for rolling engagement with the guide surfaces 168. In the preferred embodiment, spaced-apart roller members 170 are connected to the shelf 140 on either side of the mounting arm 162, by way of mounting brackets 172 which extend into the compartment 82 through elongate, parallel guide slots 174 defined in the inner rear wall panel 78. Each roller member 170 is adapted for rotation about a rotational axis "R-R" which is generally perpendicular to the rotational axis "V-V" of the screw mechanism 106. In the preferred embodiment, each guide surface 168 is formed within the compartment 82 on the inner rear wall panel 78 adjacent each guide slot 174. When the

screw mechanism 106 is actuated and the shelf 140 is raised or lowered (as the case may be), the roller members 170 rollingly engage their corresponding guide surfaces 168 thereby tending to ensure that the shelf 140 travels in a smooth manner and is maintained level at all times. It will thus be seen that the cantilever support 160 and the guide means 166 co-operate with each other to define a three-point guiding arrangement for directing the vertical displacement of the shelf 140. Alternate guide means using, for instance, other cam and cam-follower arrangements, or slide block arrangements could also be employed.

[0080] The display means 62 includes a first type of display panel 176 for carrying a promotional message 64 embodied in an interchangeable printed medium 178, and a second type of display panel, an electronic display panel 180, adapted to carry a promotional message 64 embodied in video format. In the preferred embodiment, the printed medium 178 is a poster 182 upon which may be printed a graphic image, a holographic image, or the like. The promotional message 64 carried by the display panels 176 and 180 features product information, pricing information, promotional offers, product advertising or the like.

[0081] In the preferred embodiment, each of the front wall 70, the side wall 74 and the outer rear wall panel 80 has a display panel 176 mounted thereto. While the remaining exterior side wall 76 has the electronic display panel 180 mounted thereto. However, this need not be the case in every application. For instance, if desired, only a single type of display panel, that is, either display panel 176 or 180, could be mounted to each of the exterior housing walls. In addition, while it is preferred that a display panel of the first or second type be mounted to each of the exterior housing walls, in an alternative embodiment, it may be possible to mount a display panel to only a single exterior housing wall. In such an embodiment, the remaining exterior housing walls could be left bare or could have alternate display means. In a further alternative embodiment, a display panel could be mounted to two or three of the four exterior housing walls, as desired.

[0082] Referring to Figures 6b and 11, the display panel 176 includes a four-sided, frame member 184 attachable to walls 70, 74 and 80 of the housing 60 by way of conventional fasteners, such as screws or bolts. The frame member 184 has a central cutout 186 formed therein which defines a station 188 for receiving the poster 182 therein. Access to the station 188 may be obtained by selectively removing one of the sides of the frame member 184.

[0083] Preferably, guide means 190 in the nature of a pair of spaced apart guide rail members 192 and 194, are provided for positioning the poster 182 within the station 188. As shown in Figure 6c, each guide rail member 192, 194 has a slot 196 defined therein which is sized for receiving one edge of the poster 182. When placing the poster 182 in the station 188, one of the sides of the frame member 184 is removed and the edges of the poster 182 are inserted into slots 196 defined in the guide members 192 and 194.

[0084] Alternate guide means may also be used. For instance, where the poster has a quadrilateral outline, it may be possible to use three guide rails mounted to the frame member for engaging three contiguous edges of the poster.

[0085] The display panel 176 further includes a protective sheet 198 sized to fit generally within the central cutout 186. Preferably, the protective sheet 198 is made of translucent plexiglass or the like. The protective sheet 198 is positioned within the station 188 in this same manner as the poster 182.

[0086] Other arrangements of the frame member and protective sheet are also possible. For instance, in an

alternative embodiment, a protective sheet generally similar to protective sheet 198 could be provided with substantially opaque, contiguous margins extending about its periphery. The opaque margins would co-operate with each other to define a clear, central viewing window through which the poster may be seen. In this alternative embodiment, the protective sheet would overlie the frame member and be hingedly connected thereto to thereby allow the protective sheet to be moved between an open, non-viewing position and a closed, viewing position. In the open, non-viewing position, the station formed within the frame member would be accessible to permit the poster to be placed therein, and to be removed therefrom, as needed. When the protective sheet is in the closed, viewing position, the poster would be readily visible to the customer through the viewing window. In this position, the opaque margins of the protective sheet would conceal the frame member disposed therebeneath.

[0087] In addition, securing means in the nature of a closure member could be provided to maintain the protective sheet in the closed, viewing position. Such a closure member could be a latch or a hook-and-eye fastener. Alternatively, the closure member could be magnetic in nature. More specifically, such a closure member could include one of the opposing surfaces of the protective sheet and the frame member

being magnetic and the other of the opposing surfaces thereof being ferric to thereby magnetically maintain the protective sheet in the closed, viewing position when the one and the other of the surfaces abut.

[0088] Referring to Figure 12, the electronic display panel 180 includes a high definition, LCD screen 212 and a frame 214 adapted to support the LCD screen 212 and secure same to the housing 60. The frame 214 itself is attached to the wall 76 of housing 60 by conventional fasteners, such as, screws and bolts. The LCD screen 212 may feature one or more still images or a plurality of moving images received from a videotape feed on a perpetual loop (not shown), to attract the customer's attention. The promotional message 64 carried by the LCD screen 212 could also include an audio component, if desired.

[0089] While the LCD screen 212 is preferred, it will be appreciated that a plasma screen could be used instead to similar advantage. If desired, the LCD screen 212 could be provided with interactive functionality, such as, a "touch screen". Further still, in alternative embodiments, the display means could include other types of electronic display devices, such as LED display devices or holographic projection devices.

[0090] While in the preferred embodiment, the display panels 176 and 178 are generally rectangular with their corners formed substantially at right angles (see Figures 11 and 12), in other embodiments, the display panels may be configured differently. For instance, in a retail merchandising apparatus 220 shown in Figures 14 and 15, a display panel 222 has a generally, rectangular wall panel 224 formed with rounded corners 226. The wall panel 224 includes an outermost margin 228 which extends along its periphery to bound a recessed, interior station 230. The interior station 230 is adapted to receive a promotional message 64 embodied in a printed medium, such as, a poster 232. The display panel 222 further includes a clear, protective sheet 234, preferably fabricated from plexiglass, which is sized to fit within the interior station 230 over the poster 234. In an alternative embodiment, the protective sheet could have a central viewing window surrounded by substantially opaque, contiguous margins. The protective sheet 234 has a plurality of tabs (not shown)for latching engagement with a corresponding plurality of apertures (not shown) defined in the wall panel 224 for removably attaching the protective sheet 234 to the wall panel 224.

[0091] The retail merchandising apparatus 220 also has an electronic display panel 240 (shown in Figure 16) which

includes a LCD screen 242 supported by a wall panel 244 generally similar to wall panel 218.

[0092] While it is preferred that the display panel 176 be used to carry a promotional message 64 embodied in a printed medium 178 within view of a customer, it should be appreciated that alternate display means could also be used to similar advantage. For instance, in an alternative embodiment, it may be possible to have promotional messages carried directly on the outer faces of the housing walls.

[0093] Referring to Figure 17, there is shown a retail merchandising apparatus 250 which generally resembles the retail merchandising apparatus 40 in both operation and structure. The apparatus 250 includes a housing 252 generally similar to housing 60. The housing 252 has a base member(not shown)and a plurality of upstanding exterior housing walls 254, 256, 258 and 260. Each of the exterior housing walls 254, 256, 258, 260 presents a substantially planar outer face 262 upon which a promotional message 264 embodied in printed medium 266 may be placed within view of a customer. It will thus be appreciated that the outer faces 262 of the exterior housing walls 254, 256, 258, 260 define the display means 268 of the retail merchandising apparatus 250. In contrast to the display means 62 of the preferred embodiment which are formed

separately from the housing 60, the display means 268 are integrally formed with the exterior walls 254, 256, 258 and 260 of the housing 252. Thus formed, the display means 268 offers a larger area for displaying full panel graphics.

[0094] In this embodiment, each of the outer faces 262 carries a promotional message 264. However, this need not be the case in every application. For instance, if desired, less than all of the outer faces 262 could be made to carry a promotional message 264. The remaining outer face(s)262 could be provided with display panels such as those described above in the context of the preferred embodiment. It will thus be appreciated that, in alternative embodiments, a retail merchandising apparatus could be customized to include a mix of the display means 62 and the display means 268 to enhance the appeal of the apparatus to the customer.

[0095] In the embodiment shown in Figure 17, the printed medium 266 is a substrate 268 upon which the promotional message 264 has been imprinted by conventional silk-screening, or the like. The substrate 268 is secured to the outer faces 262 of the exterior housing walls 254, 256, 258 and 260 by way of an adhesive backing. In an alternative embodiment, the substrate could be a magnetized film and the outer faces could

be coated with a ferric substance to allow for magnetic engagement of the film with the outer faces.

[0096] As will be appreciated from the foregoing description, the display panels 176, 180, 222, 240 and the display means 268, are versatile and attractive. They tend to provide expansive space for messaging and communication - which space may be customized with ease to suit the next promotional or advertising program or promote a new product - thus offering a store retailer or product manufacturer great flexibility and enhanced merchandising opportunities. Moreover, the display panels 176, 180, 222, 240 and the display means 268 avoid the creation of the undesirable "warehouse/box store look", by concealing the pallet and surrounding the lower layers of merchandise items with aesthetically pleasing promotional displays. Accordingly, an effective display of the merchandise items is achieved through an attractive, polished presentation.

[0097] With reference to Figures 6a to 10, a typical operation of the retail merchandising apparatus 40 is now described. The retail merchandising apparatus 40 is positioned at a suitable location on the floor of a store with a forklift or hand-pumped pallet truck. Preferably, prior to the retail merchandising apparatus 40 being positioned, the

display panels 174 and 178 will have already been customized to display promotional messages 64 related to the merchandise items 44 to be showcased. However, this need not always be the case.

[0098] With specific reference to Figure 6a, the shelf 140 is brought to the lowered position 54 and the inlet door 96 is moved to the open position 98 to provide access to the interior loading space 94 defined within the enclosure 68. With the shelf 140 stationed at the lowered position 54 and the inlet door 96 opened, the retail merchandising apparatus 40 is ready to receive a loaded pallet 48 therein. The loaded pallet 48 is rolled into the interior loading space 94 on a hand-pumped pallet truck (not shown) and deposited onto the shelf 140 within the shelf footprint 150 (see Figure 6b). The inlet door 96 is moved to the closed position 100 and the locking means 102 are engaged to secure the inlet door 96.

[0099] As shown in Figure 8, the topmost layer 45 of merchandise items 44 is substantially concealed by the enclosure 68. To raise the shelf 140 above the lowered position 54 such that the topmost layer 45 (or at least a portion thereof) may protrude though the top of the housing 60 in full view of a customer, the lifting means is actuated until the shelf 140 has reached a merchandise display height

270 (see Figures 9 and 10). At the merchandise display height 270, the topmost layer 45 is carried at a convenient, easily-accessible level which tends to avoid the "stoop and shop" problems associated with typical pallet displays of the prior art thereby facilitating consumer purchase.

[00100] It will be appreciated that in some instances, it may not be necessary to raise the shelf above the lowered position subsequent to placing the loaded pallet in the housing, since the loaded pallet may include additional layers of merchandise items which increase its height such that when the topmost layer thereof may already protrude through the top of the housing in view of a customer.

[00101] Thereafter, as the stock of merchandise items 44 becomes depleted, store personnel need merely raise the level of the shelf 140 to expose a new layer (or layers of merchandise items 44) in this case bottom layer 47, as shown in Figure 13. This obviates the need for frequent, labour-intensive repalletization and restocking by store personnel thereby reducing stock handling costs. When the stock is entirely depleted, the shelf 140 is brought to the lowered position 54, the inlet door 96 is moved to its open position 98, and the empty pallet 42 is removed from the interior

loading space 94 to make room for a fresh loaded pallet, as discussed generally above.

[00102] Other modifications to the retail merchandising apparatus 40 are also possible. For instance, while in the preferred embodiment the pallet support means 50 is cantilevered and the lifting means 52 is disposed outside the shelf footprint 150, in an alternate embodiment these elements could be configured differently. With reference to Figures 18 to 28, there is shown an alternate retail merchandising apparatus generally designated with reference numeral 280. The retail merchandising apparatus 280 is generally similar to the retail merchandising apparatus 40 of the preferred embodiment in that apparatus 280 includes a housing 282, pallet support means 284, lifting means 286, control means 288,and display means 290, all of which are generally analogous to their counterpart structures in apparatus 40.

[00103] The housing 282 is generally similar to housing 60 in that it has a base member 291 and a plurality of upstanding walls, namely a front wall 292, a pair of opposed side walls 294 and 296 and a rear wall 298. The walls 292, 294, 296 and 298 co-operate with each other to define an open-topped, four-sided enclosure 300. The front wall 292 is hinged for movement to define an inlet door 302 which is moveable between an open

position 304 (best shown in Figure 21) and a closed position 306 (best shown in Figure 18). The inlet door 302 permits access to an interior loading space 308 defined within the enclosure 300.

[00104] However, in contrast to the housing 60, the housing 282 lacks a mast. The front wall 292, the side walls 294 and 296, and the rear wall 298 are all of the same height. While the rear wall 298 of housing 282 is a double wall with a compartment (not shown), the lifting means 286 is not housed therein. As will be explained in greater detail below, the lifting means 286 is disposed within the interior loading space 300, beneath the pallet support means 284.

[00105] The lifting means 286 is operable to move the pallet support means 284 between a raised position 310 and a lowered position 312 relative to the floor. Referring to Figures 20 and 26, the lifting means 286 includes a top frame 314 for supporting the pallet support means 284, a base frame 316 securely fixed to the base member 291 and a scissors-jack lifting mechanism 318 connected to the top frame 314 and supported on the base frame 316. The base frame 316 is a rectangular shaped structure formed by two short frame members 320 and two long frame members 322. The top frame 314 is

similarly formed with short frame members 320 and long frame members 322.

[00106] Referring to Figure 20, the scissors-jack lifting mechanism 318 is of the conventional-type, generally well known in the art. It includes two identical scissor arm assemblies 324 and 326 joined by a connector pin 328. The connector pin 328 defines the fulcrum about which the scissor arms 330 and 332 of each scissor arm assembly 324, 326 may be made to pivot. Each scissor arm 330 has a top end 334, connected to the top frame 314, and a bottom end 336 connected to the base frame 316. A roller 338 rotatively mounted to each end 334, 336 permits rolling motion of the roller 338 along a track 340, 342 defined in the long frame members 322 of the top and base frames 314 and 316, respectively. The scissor arms 330 are joined to each other by a first cross-member 343 which extends therebetween. Each scissor arm 332 is similarly configured with a roller 338 at each end thereof for rolling motion along the tracks 340, 342. A second cross-member 345 disposed adjacent the base frame 314 extends between the scissor arms 332 to connect same.

[00107] A cylinder 344 housing a hydraulic piston 346 is disposed between the scissor arm assemblies 324 and 326. The cylinder 344 is pivotally connected at one end thereof to a

bracket 348 mounted on the first cross-member 343. At the opposite end thereof, a pin 350 is provided for pivotal connection of the cylinder 344 to the second cross-member 345 fixed to the scissor arm 332. When the scissors-jack lifting mechanism 318 is actuated and the piston 346 is expanded, the top ends of the scissor arms 330 and 332 are brought relatively nearer to each other along the track 340 thereby causing the pallet support means 284 carried on the top frame 314 to be raised from the floor. Conversely, contraction of the piston 346 causes the pallet support means 284 to be lowered. Actuation of the piston 346 is governed electronically by the control means 288.

[00108] Various modifications to the scissors-jack lifting mechanism are possible. For instance, wherein the present embodiment employs dual scissor arms assemblies 324 and 326, in an alternative embodiment, it may be possible to employ a dual tandem scissor arm assemblies. Moreover, where hydraulics are not desired, the scissor-jack lifting mechanism may be pneumatically driven. Alternatively, a lifting mechanism of a different type may be employed, for instance, a electrically actuable screw-jack mechanism.

[00109] With reference to Figure 19, the pallet support means 284 includes a substantially planar, platform, shelf or

table 354 the underside of which is supported on the top frame 314 of the lifting means 286. The table 354 has four sides 356, 358, 360 and 362, each having an outermost edge. The outermost edges of the sides 356, 358, 360 and 362 co-operate with each other to define a table footprint 366. The shelf footprint 366 is sized slightly larger than the surface area of the pallet 42 to facilitate loading of same onto the table 354. Contrary to the shelf 140 of the preferred embodiment, the table 354 does not have short walls extending about its periphery to define a raised guard member. However, if desired, the table could be configured to have such a guard member.

[00110] In this embodiment, the lifting means 286 is disposed beneath the table 354, substantially within the table footprint 358 (as best shown in Figure 25). As such, it will be appreciated that at the lowered position 312 the table 354 is not carried as low as the shelf 140 of the preferred embodiment when it is at the lowered position 54. In light of the foregoing, more extensive ramp means 368 than ramp means 156 are provided to facilitate rolling transport of the loaded pallet 48 onto the table 354. The ramp means 368 includes a ramp member 370 which is mounted beneath the table 354 and is adapted for sliding motion relative thereto. The ramp member 370 is selectively extendable between an out-of-use, stowage

position 372 (shown in Figure 21) and an in-use, loading position 374 (shown in Figures 23 and 24). A slot 376 is defined in the top frame 312 for locating the ramp member 370 when in the stowage position 372.

[00111] Deployment of the ramp member 370 is now described with reference to Figures 21 to 24. Prior to moving the ramp member 370 to its in-use, loading position 374, care is taken to ensure the table 354 is moved to the lowered position 312 and the inlet door 302 is in the open position 304. The ramp member 370 is then extended frontwardly and downwardly away from the slot 376 until its front edge is made to rest securely on the floor. Thereafter, a loaded pallet 48 carried on a conventional hand-pumped pallet truck (not shown) may be rolled onto the table 354 from the adjacent floor, or conversely, an empty pallet 42 may be rolled off the table 354.

[00112] It will be appreciated that the retail merchandising apparatus 280 need not be provided with a ramp member. The need for a ramp member may be entirely avoided by having a fork lift deposit a loaded pallet directly onto the table of the retail merchandising apparatus.

[00113] As can be seen in Figures 18, 27 and 28, the display means 290 are generally similar to display means 268 of the retail merchandising apparatus 250, in that, each of the outer faces of the walls 292, 294, 296 and 298 of the housing 282 carries a promotional message 378. The retail merchandising apparatus 280 could, of course, be customized to include a mix of other types of display panels, units, or devices, such as, the display means 62 described earlier.

[00114] Referring to Figure 29, there is shown an alternate retail merchandising apparatus generally designated with reference numeral 380. The retail merchandising apparatus 380 is generally similar to the retail merchandising apparatus 280, but differs in that, the latter is additionally provided with skirt means 382 to protect the housing 384 thereof from damage. In this embodiment, the skirt means 382 includes a plurality of kick plates 386 which are secured to a lower margin 388 of the housing 384 by conventional fastening means. Each kick plate 386 gradually widens towards the floor for added protection. Preferably, the kick plates 386 are fabricated from metal, or a similar, durable, wear-resistant material. If desired, the outer surface 389 of each kick plate 386 could also be adapted to carry a promotional message. For instance, a promotional message could be imprinted onto the outer surfaces 389 of the kick plates 386.

[00115] In a further alternative embodiment to that shown in Figure 29, a retail merchandising apparatus shown in Figure 30 is generally designated with reference numeral 390. The retail merchandising apparatus 390 generally resembles retail merchandising apparatus 380, in that, the latter also includes skirt means 392 in the nature of kick plates 394 mounted about the lower margin 396 of the housing 398. However, the retail merchandising apparatus 390 employs alternate display means to those previously described herein. The alternate display means 400 includes a display panel 402 for carrying a promotional message 404 and a plurality of structural members 406 in the nature of metal channel members 408, which, when assembled, form a frame 410. The frame 410 bounds the display panel 402 on three sides thereof. The fourth, remaining side of the display panel 402 is bound by the topmost edge of the kick plate 394. Assembly of the metal channel members 408 is relatively simple and quick, and requires minimal use of tools. The frame 410 and display panel 402 may be secured to the outer walls of the housing 398 by conventional fastening means.

[00116] To further maximize the promotional effectiveness of any of the retail merchandising apparatus described herein, additional display means may be provided. These display means

may be carried overhead at a height above the top of the housing and may include display panels of the type adapted to display a promotional message embodied in a printed medium or electronic display panels.

[00117] In the preferred embodiment and in the various alternative embodiments described above, the retail merchandising apparatus, and more specifically, the pallet support means, were sized slightly larger than a standard 48" x 40" pallet. It will be appreciated that in alternative embodiments, retail merchandising apparatus could be dimensioned to readily accommodate other pallet sizes. For instance, the retail merchandising apparatus 420, shown in Figure 31, has been sized to accommodate a loaded half-pallet 422 measuring 24" x 40". Figure 32 shows a retail merchandising apparatus 424 adapted to display a loaded quarter-pallet 426 measuring 24" x 20". Where the pallet size is significantly smaller such that the load borne by the pallet support means is substantially lighter, the lifting means of the retail merchandising apparatus need not be as robust as those described earlier. The lifting means could be adapted to displace a lighter load. Accordingly, simple mechanical lifting systems, such as manually operated cranks could be used. Mechanical spring systems or inflatable air bags could also be employed to similar advantage.

[00118] It is will thus be evident that the various retail merchandise apparatus described above can be advantageously deployed as stand-alone, mid-aisle display units; as part of endcap displays, or end-of-aisle display units; or as shelf-mounted display units.

[00119] A novel method for merchandising a pallet for retail use is now described below with specific reference to elements of the retail merchandising apparatus 40 of the preferred embodiment, unless otherwise indicated. The method includes the steps of: placing the loaded pallet 48 on pallet support means 50 contained within the housing 60; selectively moving the pallet support means 50 between the lowered position 54 and the raised position 56 relative to the floor such that a selected portion of the merchandise items 44 carried on the loaded pallet 48 protrudes from the top of the housing 60 within view of a customer; and displaying from the housing 60 the promotional message 64 within view of the customer.

[00120] Preferably, the placing step includes: selectively moving the pallet support means 50 to the lowered position 54 to facilitate placement of the loaded pallet 48 in the housing 60; moving the inlet door 96 provided on the housing 60 to the open position 98 to thereby permit access to the pallet

support means 50; deploying ramp means 156 mounted within the housing 60 to facilitate rolling transport of the loaded pallet 48; and depositing the loaded pallet 48 onto the pallet support means 50 within the footprint 150 defined thereon. Preferably, the inlet door 96 is moved to the closed position 100 and secured in that position after the loaded pallet 48 has been placed on the pallet support means 50.

[00121] With reference now to the elements of the retail merchandising apparatus 280, in an alternative method, the step of deploying ramp means may include selectively extending a ramp member 370 to an in-use position 374. Additional steps of the alternate method may include selectively retracting the ramp member 370 to an out-of-use position 372 after the loaded pallet 48 has been placed on the pallet support means 284; and moving the inlet door 302 to a closed position 306 and securing same in that position.

[00122] The step of selectively moving the pallet support means 50 includes actuating the lifting means 52 operatively connected to the pallet support means 50 to cause vertical displacement of the pallet support means 50 within the housing 60. According to the preferred method, the actuating step includes rotatively driving the screw member 108 with the electric motor 112 to urge the nut member 110 to ride along

the screw member 108 to thereby cause the pallet support member 50 to be moved between the lowered position 54 and the raised position 56.

[00123] The preferred method further includes the step of concealing from the customer's view the pallet 42 and the pallet support means 50 within the housing 60.

[00124] Where the promotional message 64 is embodied in a printed medium 178, the step of displaying the promotional message 64 includes attaching the display panel 176 to at least one of the walls defining the housing 60; and mounting the printed medium 178 in the station 188 defined within the display panel 176.

[00125] Although the above description and accompanying drawings relate to specific preferred embodiments and methods of the present invention as presently contemplated by the inventor, it will be understood that various changes, modifications and adaptations may be made without departing from the spirit of the invention.